

A COYOTE-LIKE WOLF JAW FROM THE RANCHO  
LA BREA PLEISTOCENE

By CHESTER STOCK

Examination of several hundred lower jaws in the collections of the Los Angeles Museum representing principally the coyote but including also timber wolf material from the Pleistocene of Rancho La Brea brings to light a single specimen of unique character from excavation No. 61. This mandible No. V 5203, consists of the two rami with the dentition including  $P^2 - M^1$  inclusive.  $P^1$  is absent. The jaw, Plate 10, figs. 1 and 2, is characterized by a shortness and massiveness in which it exhibits a decided contrast to the mandible of the coyote from Rancho La Brea. Massiveness is particularly displayed by the horizontal ramus which is noticeably thicker transversely than in the coyote and is more like that in the timber wolf. This is likewise true when the specimen is compared with jaws that belong to larger individuals of the extinct coyote from the asphalt deposits. A distinctive feature of the wolf separating it from the coyote is the greater convexity of the inferior margin of the horizontal ramus. In this character No. V 5203 is more like the former than the latter.

The premolars in No. V 5203 are closely spaced,  $P^1$  is absent, the diastema between  $P^2$  and  $P^3$  is short, and the individual teeth are noticeably wider for their length in specimen No. V 5203 than in the coyote.  $M^1$  is relatively short and wide. In the heel region of this tooth the hypoconid relative to the size of the entoconid is a larger cusp than in the coyote.

Comparison with the timber wolf, based upon jaws from Rancho La Brea and several recent specimens available from western North America, clearly emphasizes the small size of No. V 5203. In this character the specimen is more like a coyote. The dentition while suggestive of the heavier dentition occurring in the timber wolf comprises teeth that are distinctly smaller than the teeth of wolves and are more like those in the coyote.

Among the several types of canids described from the Rancho La Brea Pleistocene the nearest approach to No. V 5203 in the characters mentioned above is made by *Canis andersoni*. This animal recognized by J. C. Merriam<sup>1</sup> on the basis of a single specimen was regarded as a short-headed, coyote-like wolf distinct from any other known type of canid from Rancho La Brea. Unfortunately this skull lacks the mandible. Comparison of the Los Angeles Museum specimen with the skull of

<sup>1</sup> Merriam, J. C., Mem. Univ. Calif., vol. 1, no. 2, pp. 260-261, figs. 41, 42, 1912.

*C. andersoni* in the University of California collection discloses the fact that the former is larger. It is likewise apparent that the mandible of *C. andersoni* would have been more slender than No. V 5203. As Merriam points out, the type of *C. andersoni* belongs to a young individual. However, it seems unlikely that the differences between No. V 5203 and No. 12249 U. C. C., the type of *C. andersoni*, are due entirely to age. Merriam has indicated that the upper carnassials, the only teeth preserved with the skull are approximately the size of those in the living coyote, but appear to be slightly thicker. As described above the lower teeth in No. V 5203 are likewise slightly thicker than in the coyote. On the basis of the ratio, length of  $P_2^1$ : length of  $M_1^1$ , in the modern coyote, the length of  $M_1^1$  in No. V 5203 is close to the estimated length of this tooth as determined from the length of  $P_2^1$  in *C. andersoni*. Thus the differences between No. V 5203 and the type of *C. andersoni* are exhibited principally in the mandible. These are regarded of sufficient weight to establish the following species:

CANIS PETROLEI, n. sp.

TYPE SPECIMEN: No. V-5203 L. A. Mus. Coll., a mandible with  $P_2^2$  -  $M_1^1$ , Plate 10.

LOCALITY: L. A. Mus. Excavation No. 61, Rancho La Brea Pleistocene.

SPECIFIC CHARACTERS: Mandible heavier and shorter than in Recent coyotes of California or in *Canis latrans orcutti* from the Rancho La Brea Pleistocene. Convexity of lower border of mandible more like that in the timber wolf than like that in the coyote. Differs from short-headed Pleistocene coyote, *Canis andersoni*, in larger size and heavier build.

MEASUREMENTS (in millimeters)

Length from anterior end of C to posterior end of $M_3^3$ , alveolar measurement .....	94.1
Length $M_1^1$ - $M_3^3$ .....	36.8
$P_2^2$ — length 10; width .....	4.7
$P_3^3$ — length 11.1; width .....	5.3
$P_4^4$ — length 12.2; width .....	6.3
$M_1^1$ — length 22.1; width .....	9.3
Length from anterior end of symphysis to posterior end of condyle .....	149.1
Height of coronoid process .....	58.6
Height of condyle .....	30
Depth of ramus at anterior end of $M_1^1$ .....	25
Thickness of ramus below trigonid portion of $M_1^1$ .....	13.2



1



2

PLATE 10

Figures 1 and 2. *Canis petrolei*, n. sp. Mandible, No. V 5203,  
L. A. Mus. Coll.; superior and lateral views, x  $\frac{3}{4}$ . Rancho  
La Brea Pleistocene. Photograph by E. S. Cobb.